

Date: March, 2005

Guidelines For Estimating **Weaner Pig (Nursery) Costs 5 - 23 kg** Based on marketing 32,592 pigs

This publication is intended to provide a format and a set of guidelines for determining the cost of production for a weaner pig 5-23 kg enterprise. This type of operation is intended to represent the second stage, or nursery, of a three stage pork system. The three production stages are as follows: first stage - farrow to 5 kg, second stage - weaner pig (nursery) 5 to 23 kg, third stage - grower/finisher 23 kg to market weight. Adjustments will be necessary when applying these figures to your enterprise.

The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the breeding stock, management practices, and facilities seen in modern, well managed swine operations of comparable size in Manitoba. Productivity and performance assumptions are based on information collected by department specialists, feed companies and other organizations. Where individual herd productivity and performance levels differ from those listed adjustments will be required.

Accurate, up to date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user. If you require assistance with developing your individual budget, please contact your local MAFRI office.

Weaner Pig (Nursery) Costs 5-23 kg Cost of Production

The following farrow wean cost of production budget is **based on the assumption that all feed is purchased.**

The budget also includes a land investment cost based on the assumption that 160 acres would be required for this size of operation, with 140 acres being rented out at \$25 per acre.

If developing a cost of production budget to include home mixed rations the following items should be added to the budget:

- additional equipment costs associated with a mix mill;
- additional bins for different ingredients;
- additional labour for feed preparation.

The rations illustrated in this budget are examples only. Individual farm conditions should be taken into account when formulating the diets. Producers need to know what the feed intakes of their animals are. Please consult with a nutritionist for diet formulations suggestions.

The Manitoba pork production industry profile is changing and this budget was specifically designed to address the need of producers who may want to analyze the cost of starting up or switching to a swine nursery 5-23 kg operation. Several companies are offering contracts with varying levels of guarantees. Producers need to accurately calculate their costs before they can properly make a decision.

Weaner Pig (Nursery) 5-23 kg Summary **March, 2005**

	<u>\$/Pig</u> <u>Sold</u>	<u>Total</u> <u>Cost</u>	<u>Your Cost</u>
A. Operating Costs			
1. Feed Costs:			
1.01 Pre Starter 1	\$0.61	\$19,881	_____
1.02 Pre Starter 2	\$2.29	\$74,636	_____
1.03 Starter 1	\$2.59	\$84,413	_____
1.04 Starter 2	<u>\$7.15</u>	<u>\$233,033</u>	_____
Total Feed Cost	\$12.64	\$411,963	_____
2. Other Operating Costs:			
2.01 Weanling cost	\$38.50	\$1,254,792	_____
2.02 Veterinary Medicine & Supplies	\$0.43	\$14,100	_____
2.03 Maintenance & Repairs	\$0.14	\$4,563	_____
2.04 Hydro & Propane	\$2.15	\$70,000	_____
2.05 Insurance	\$0.25	\$8,148	_____
2.06 Manure Costs	\$0.48	\$15,707	_____
2.07 Office Supplies	\$0.04	\$1,440	_____
2.08 Levy, Marketing & Transportation	\$1.00	\$32,592	_____
2.09 Property Taxes	<u>\$0.20</u>	<u>\$6,615</u>	_____
Subtotal Operating Costs	\$55.84	\$1,819,920	_____
2.10 Interest on Operating Cost	<u>\$0.40</u>	<u>\$13,037</u>	_____
Total Operating Costs	\$56.24	\$1,832,957	_____
B. Fixed Costs			
3. Depreciation:			
3.01 Buildings and Manure Storage	\$0.68	\$22,163	_____
3.02 Equipment	<u>\$1.10</u>	<u>\$35,851</u>	_____
Total Depreciation Cost	\$1.78	\$58,014	_____
4. Investment:			
4.01 Land Cost	\$0.05	\$1,600	_____
4.02 Buildings and Manure Storage	\$0.32	\$10,429	_____
4.03 Equipment	<u>\$0.27</u>	<u>\$8,800</u>	_____
Total Investment Cost	<u>\$0.64</u>	<u>\$20,829</u>	_____
Total Fixed Costs	\$2.42	\$78,843	_____
C. Labour			
Wages, benefits and hired manager	\$1.79	\$58,340	_____
Total Cost of Production	\$60.45	\$1,970,140	_____
Break-Even Price	<u>\$/Pig</u>		
Operating Cost	\$56.24		_____
Operating & Labour Cost	\$58.03		_____
Operating Labour & Fixed Cost	\$60.45		_____

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of this industry. Interpretation and utilization of this information is the responsibility of the user.

Weaner Pig (Nursery) Production Costs 5-23 kg

1. This input table outlines the cost of production for the weaner barn only.
2. Buildings and equipment are valued at new cost.
3. Manure haulage is contracted out.

Herd Profile

Weaner Pig Places	4,800	
Number of turns	7	
Weaner Pigs Purchased	33,600	
Percent Post-Weaning Mortality	3.0	
Pigs Died, Post-Weaning	1,008	
Weaner Pigs Sold	32,592	
Average Market Price	\$70.00 /cwt	\$154.32 /ckg
Weanling Formula Factor (% of Mkt Price)	55.00 %	
Calculated Weanling Purchase Price	\$38.50 /pig	

Feed Requirements

		Ration Cost	
		Purchased	Home-Mixed
Pre Starter 1(sew)	0.4 kg/pig	\$1,520.00	\$0.00 /tonne
Pre Starter 2	1.8 kg/pig	\$1,270.00	\$0.00 /tonne
Starter 1	7.0 kg/pig	\$370.00	\$0.00 /tonne
Starter 2	22.0 kg/pig	\$325.00	\$0.00 /tonne
Total Feed	31.2 kg/pig		

Weaner Pig Efficiency

Days Weaner on feed (nursery)	42 days
Total Cycle Days (per turn)	52 days
Target Starting Weight	5.0 kg
Target Ending Weight	23.0 kg
Feed Conversion Ratio (feed:gain)	1.73 kg
Average Daily Gain	0.43 kg

Labour

Total Hours per 7-day week	80.0 hours/week
Wage (includes benefits & hired manager)	\$14.00 /hour

Capital Investment

		<u>\$/Sq. Ft.</u>	<u>\$/Pig Place</u>	<u>Total</u>
Buildings				
Barn	9,600 sq ft	\$43.75	\$87.50	\$420,000
Office & loading				\$5,000
Feed Mill (building only)				<u>\$0</u>
Total Building Cost				\$425,000
Equipment				
Nursery barn				\$285,000
Generator				\$12,000
Electrical & other				\$90,000
Fire Alarm System				\$1,000
Feed Bins				\$10,000
Ingredient Bins				<u>\$0</u>
Total Equipment Cost				\$398,000
Total Buildings and Equipment Cost				\$823,000
Land Value				
Land Investment	20 acres @	\$500		\$10,000
Other Costs				
Site preparation				\$30,000
Manure Storage				<u>\$28,000</u>
Total Other Costs				\$58,000
Total Capital Investment				\$891,000

Feed Ingredient Costs

<u>Ingredients</u>	<u>Price/tonne</u>	<u>Your Cost</u>
Wheat	\$110	_____
Barley	\$110	_____
Corn	\$117	_____
Soybean Meal - 47 %	\$270	_____
Canola Meal - 34%	\$165	_____
Peas	\$100	_____
Creep Premix	\$850	_____
Sow Micro Premix	\$3,000	_____
Grower Micro Premix	\$2,500	_____
Canola Oil	\$900	_____
Whey Powder	\$800	_____
Herring Meal	\$1,500	_____
Plasma	\$7,500	_____
Limestone	\$80	_____
Dical (16% Ca-21% P)	\$455	_____
Salt - 96%	\$125	_____
Phytase	\$11,000	_____
L-Lysine HCL	\$2,500	_____
L-Threonine	\$4,800	_____
D,L-Methionine	\$4,500	_____
Oats - Steam rolled	\$400	_____
Processing Cost		_____
(Hydro & Repairs/Maintenance & Insurance)	\$3.25	_____
Percent Weight loss due to processing	1.25 %	_____
Labour	\$4.00	_____

Suggested Home Mixed Rations

	Pre starter 1	Pre starter 2	Starter 1	Starter 2
	(kg)	(kg)	(kg)	(kg)
Wheat	106.00	134.50	400.00	407.60
Barley	0.00	0.00	0.00	65.00
Corn	0.00	0.00	0.00	250.00
Soybean Meal - 47 %	120.00	130.00	223.00	227.00
Canola Meal - 34%	0.00	0.00	204.50	0.00
Peas	0.00	0.00	0.00	0.00
Creep Premix	0.00	0.00	0.00	0.00
Sow Micro Premix	5.00	5.00	5.00	5.00
Grower Micro Premix	0.00	0.00	0.00	0.00
Canola Oil	27.00	19.00	11.30	0.00
Whey Powder	121.00	125.00	90.70	0.00
Herring Meal	61.00	75.00	45.50	25.00
Plasma	59.00	0.00	0.00	0.00
Limestone	12.50	12.50	7.00	7.00
Dical (16% Ca-21% P)	10.00	10.00	8.00	8.00
Salt - 96%	3.50	3.50	3.50	3.50
Phytase	0.00	0.00	0.50	0.50
L-Lysine HCL	0.50	0.50	1.00	1.40
L-Threonine	0.00	0.00	0.00	0.00
D,L-Methionine	0.00	0.00	0.00	0.00
Oats - Steam rolled	<u>474.50</u>	<u>485.00</u>	<u>0.00</u>	<u>0.00</u>
Total must equal 1000 kg	1,000.00	1,000.00	1,000.00	1,000.00

Feed Requirement and Cost Summary

	Amount	Price	Ration Cost	Your
	(kg)	\$ /tonne	\$ /tonne	Cost
Pre starter 1				
Wheat	106.0	\$110.00	\$11.66	
Soybean Meal - 47 %	120.0	\$270.00	\$32.40	
Sow Micro Premix	5.0	\$3,000.00	\$15.00	
Canola Oil	27.0	\$900.00	\$24.30	
Whey Powder	121.0	\$800.00	\$96.80	
Herring Meal	61.0	\$1,500.00	\$91.50	
Plasma	59.0	\$7,500.00	\$442.50	
Limestone	12.5	\$80.00	\$1.00	
Dical (16% Ca-21% P)	10.0	\$455.00	\$4.55	
Salt - 96%	3.5	\$125.00	\$0.44	
L-Lysine HCL	0.5	\$2,500.00	\$1.25	
Oats - Steam rolled	474.5	\$400.00	\$189.80	
Total Pre Starter 1	1,000.0 kg		\$911.20	
Adjusted for weight loss (percentage)		1.25 %	\$922.59	
Plus processing cost per tonne		\$3.25	\$925.84	
Plus Labour Cost		\$4.00	\$929.84	
Pre starter 2				
Wheat	134.5	\$110.00	\$14.80	
Soybean Meal - 47 %	130.0	\$270.00	\$35.10	
Sow Micro Premix	5.0	\$3,000.00	\$15.00	
Canola Oil	19.0	\$900.00	\$17.10	
Whey Powder	125.0	\$800.00	\$100.00	
Herring Meal	75.0	\$1,500.00	\$112.50	
Limestone	12.5	\$80.00	\$1.00	
Dical (16% Ca-21% P)	10.0	\$455.00	\$4.55	
Salt - 96%	3.5	\$125.00	\$0.44	
L-Lysine HCL	0.5	\$2,500.00	\$1.25	
Oats - Steam rolled	485.0	\$400.00	\$194.00	
Total Pre Starter 2	1,000.0 kg		\$495.74	
Adjusted for weight loss (percentage)		1.25 %	\$501.94	
Plus processing cost per tonne		\$3.25	\$505.19	
Plus Labour Cost		\$4.00	\$509.19	

Starter 1

Wheat	400.0	\$110.00	\$44.00	
Soybean Meal - 47 %	223.0	\$270.00	\$60.21	
Canola Meal - 34 %	204.5	\$165.00	\$33.74	
Sow Micro Premix	5.0	\$3,000.00	\$15.00	
Canola Oil	11.3	\$900.00	\$10.17	
Whey Powder	90.7	\$800.00	\$72.56	
Herring Meal	45.5	\$1,500.00	\$68.25	
Limestone	7.0	\$80.00	\$0.56	
Dical (16% Ca-21% P)	8.0	\$455.00	\$3.64	
Salt - 96%	3.5	\$125.00	\$0.44	
Phytase	0.5	\$11,000.00	\$5.50	
L-Lysine HCL	1.0	\$2,500.00	\$2.50	
Total Starter 1	1,000.0 kg		\$316.57	
Adjusted for weight loss (percentage)		1.25 %	\$320.53	
Plus processing cost per tonne		\$3.25	\$323.78	
Plus Labour Cost		\$4.00	\$327.78	

Starter 2

Wheat	407.6	\$110.00	\$44.84	
Barley	65.0	\$110.00	\$7.15	
Corn	250.0	\$117.00	\$29.25	
Soybean Meal - 47 %	227.0	\$270.00	\$61.29	
Sow Micro Premix	5.0	\$3,000.00	\$15.00	
Herring Meal	25.0	\$1,500.00	\$37.50	
Limestone	7.0	\$80.00	\$0.56	
Dical (16% Ca-21% P)	8.0	\$455.00	\$3.64	
Salt - 96%	3.5	\$125.00	\$0.44	
Phytase	0.5	\$11,000.00	\$5.50	
L-Lysine HCL	1.4	\$2,500.00	\$3.50	
Total Starter 2	1,000.0 kg		\$208.67	
Adjusted for weight loss (percentage)		1.25 %	\$211.28	
Plus processing cost per tonne		\$3.25	\$214.53	
Plus Labour Cost		\$4.00	\$218.53	

Weaner Pig (Nursery) 5-23kg Production Costs Worksheet

A. Operating Costs

1. Feed Requirements and Costs

Your Cost

1.01 Pre starter 1

	0.40	kg ration/pig
x	\$1,520.00	/tonne
÷	<u>1,000</u>	kg/tonne
=	\$0.61	/pig sold

1.02 Pre starter 2

	1.8	kg ration/pig
x	\$1,270.00	/tonne
÷	<u>1,000</u>	kg/tonne
=	\$2.29	/pig sold

1.03 Starter 1

	7.0	kg ration/pig
x	\$370.00	/tonne
÷	<u>1,000</u>	kg/tonne
=	\$2.59	/pig sold

1.04 Starter 2

	22.0	kg ration/pig
x	\$325.00	/tonne
÷	<u>1,000</u>	kg/tonne
=	\$7.15	/pig sold

2. Other Operating Costs

2.01 Weanling Purchase

	\$70.00	\$/cwt average market price
x	<u>55.00</u>	% of mkt price weanling formula factor
	\$38.50	purchase cost

2.02 Veterinary Medicine & Supplies

	\$3,600	professional services
+	\$10,500	medication
÷	<u>32,592</u>	pigs sold
=	\$0.43	/pig sold

2.03 Maintenance & Repairs

	\$823,000	building & equipment cost	
x	0.55	% year repair & maintenance	
÷	<u>32,592</u>	<u>pigs sold</u>	
=	\$0.14	/pig sold	

2.04 Hydro & Propane

	\$30,000	hydro	
+	\$40,000	propane	
÷	<u>32,592</u>	<u>pigs sold</u>	
=	\$2.15	/pig sold	

2.05 Insurance

	\$823,000	investment	
x	\$0.65	rate/\$100	
÷	100	/\$100 capital	
÷	<u>32,592</u>	<u>pigs sold</u>	
=	\$0.16	/pig sold	

	\$264,000	market hogs value	
x	\$0.65	/\$100 capital invested	
÷	<u>32,592</u>	<u>pigs sold</u>	
=	\$0.05	/pig sold	

	\$45.00	business interruption coverage/feeder	
x	4,800	feeders	
x	\$0.65	/\$100 capital invested	
÷	<u>32,592</u>	<u>pigs sold</u>	
=	\$0.04	/pig sold	

Total = \$0.25 /pig sold

2.06 Manure Costs

Haulage	2.2	litres/pig/day	
x	365	days	
x	\$0.003	/litre	
x	4,800	pig places	
÷	<u>32,592</u>	<u>pigs sold</u>	
=	\$0.35	/pig sold	

Odour control

	\$4,300	total cost
÷	<u>32,592</u>	<u>pigs sold</u>
=	\$0.13	/pig sold

Total = \$0.48 /pig sold

2.07 Office Supplies

	\$0.30	/pig place
	\$4,800	pig places
÷	<u>32,592</u>	<u>pigs sold</u>
=	\$0.04	/pig sold

2.08 Levy, Marketing & Transportation

\$1.00 /pig sold

2.09 Property Taxes

	\$6,615	total taxes
÷	<u>32,592</u>	<u>pigs sold</u>
=	\$0.20	/pig sold

2.10 Interest on Operating Cost:

	\$38.50	weaner cost
+	\$17.34	subtotal operating
÷	2	average
x	52	days per turn
÷	365	days per year
x	<u>6.00</u>	<u>% operating interest</u>
=	\$0.40	/pig sold

B. Fixed Costs**3. Depreciation:**
$$\frac{\text{Original cost} - \text{Salvage Value}}{\text{Useful Life}}$$
3.01 Buildings

	\$483,000	building cost (including manure storage)	_____
-	\$42,500	salvage value (building only)	_____
÷	20	years useful life	_____
÷	<u>32,592</u>	<u>pigs sold</u>	_____
=	\$0.68	/pig sold	_____

3.02 Equipment

	\$398,000	equipment cost	_____
-	\$39,800	salvage value	_____
÷	10	years useful life	_____
÷	<u>32,592</u>	<u>pigs sold</u>	_____
=	\$1.10	/pig sold	_____

4. Investment:
$$\frac{\text{Original Cost} + \text{Salvage Value}}{2} \times \text{Investment Rate}$$
4.01 Land

	\$10,000	land value	_____
+	\$30,000	site preparation	_____
x	4.0	% investment rate	_____
÷	<u>32,592</u>	<u>pigs sold</u>	_____
=	\$0.05	/pig sold	_____

4.02 Buildings

	\$483,000	building cost (including manure storage)	_____
+	\$42,500	salvage value (building only)	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>32,592</u>	<u>pigs sold</u>	_____
=	\$0.32	/pig sold	_____

4.03 Equipment

	\$398,000	equipment cost	_____
+	\$39,800	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>32,592</u>	<u>pigs sold</u>	_____
=	\$0.27	/pig sold	_____

C. Labour

	80.0	hours/week	_____
x	52	weeks/year	_____
x	\$14.00	/hour	_____
÷	<u>32,592</u>	<u>pigs sold</u>	_____
=	\$1.79	/pig sold	_____

Summary of Home Mixed Feed Ingredients Used

	Total pigs sold		32,592	
	Total per Year (tonnes)	Total per Month (tonnes)	Total per Pig (kgs)	Total per Pig (lbs)
Wheat	0.0	0.00	0.0	0.0
Barley	0.0	0.00	0.0	0.0
Corn	0.0	0.00	0.0	0.0
Soybean Meal - 47 %	0.0	0.00	0.0	0.0
Canola Meal - 34%	0.0	0.00	0.0	0.0
Peas	0.0	0.00	0.0	0.0
Creep Premix	0.0	0.00	0.0	0.0
Sow Micro Premix	0.0	0.00	0.0	0.0
Grower Micro Premix	0.0	0.00	0.0	0.0
Canola Oil	0.0	0.00	0.0	0.0
Whey Powder	0.0	0.00	0.0	0.0
Herring Meal	0.0	0.00	0.0	0.0
Plasma	0.0	0.00	0.0	0.0
Limestone	0.0	0.00	0.0	0.0
Dical (16% Ca-21% P)	0.0	0.00	0.0	0.0
Salt - 96%	0.0	0.00	0.0	0.0
Phytase	0.0	0.00	0.0	0.0
L-Lysine HCL	0.0	0.00	0.0	0.0
L-Threonine	0.0	0.00	0.0	0.0
D,L-Methionine	0.0	0.00	0.0	0.0
Oats - Steam rolled	0.0	0.00	0.0	0.0
Total	0.0	0.0	0.0	0.0

Summary of Purchased Feed Ingredients Used

	Total per Pig Mkt (kgs)	Total per Year (tonnes)	Total per Month (tonnes)	Total per Pig Mkt (lbs)
Pre starter 1	0.4	13.4	1.1	0.9
Pre starter 2	1.9	60.5	5.0	4.1
Starter 1	7.2	235.2	19.6	15.9
Starter 2	22.7	739.2	61.6	50.0
Total	32.2	1,048.3	87.4	70.9
Total	32.2	1,048.3	87.4	70.9

For further information contact your local MAFRI office.

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